M28C(86)-1

CURRENT INDUSTRIAL REPORTS

Industrial Gases

U.S. Department of Commerce
BUREAU OF THE CENSUS

JANUARY 1986

M28C(86)-1
Issued March 1986

The statistics in this publication are based on a survey of manufacturers and represent total U.S. shipments of industrial gases (excluded are industrial gases vented or used for fuel for the producer). Estimates are included for companies whose reports were not received in time for tabulation. A description of the survey methodology and related information appears on page 3.

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Table 1. SUMMARY OF PRODUCTION OF PRINCIPAL GASES: 1984 TO 1986

(Million cubic feet, except as noted)

Month and year	Acetylene (28132 00)	Argon, high purity (28137 15)	Carbon dioxide (short tons)			Hydrogen, high and low purity (100%) (28137 20)	Nitrogen, high and low purity (100%) (28135 00)	Oxygen, high and low purity (100%) (28136 00)
			Gas (28133 01)	Liquid (28133 02)	Solid (28133 31)			
1986								
January	342	913	203,900	325,949	21,117	10,069	56,619	32,336
1985								
Total	4,481	9,548	2,722,506	4,052,018	262,554	106,850	647,030	378,654
December	337	846	224,714	322,090	20,501	9,812	55,416	33,011
November	296	847	217,346	339,723	22,759	9,541	54,845	32,080
October	345	870	226,214	356,486	23,579	9,858	57,989	32,048
September	382	831	225,400	340,347	23,958	7,967	55,453	32,281
August	425	894	243,594	395,352	26,762	8,191	54,421	32,407
July	369	837	253,581	357,113	26,878	8,362	53,010	30,954
June	385	861	236,108	369,114	22,509	9,053	53,051	29,824
May	400	885	201,202	368,011	22,490	9,415	52,791	31,976
April	382	921	235,866	347,077	20,733	8,923	52,172	32,650
March	402	927	253,282	312,474	19,061	9,243	54,601	33,724
February	384	754	196,274	265,663	15,757	8,582	50,821	27,811
January	374	753	208,925	278,568	17,567	7,903	52,460	29,888
1984								
Total	4,968	10,587	3,481,547	4,209,147	355,708	109,359	660,527	385,390
December	443	929	234,188	332,901	20,806	9,925	56,047	29,489
November	450	1,013	264,966	339,309	24,534	8,699	56,979	30,011
October	388	819	277,675	355,818	26,440	8,144	56,714	31,153
September	373	857	270,512	384,138	27,489	8,422	55,071	29,582
August	366	813	310,389	380,534	34,731	8,834	54,826	31,386
July	446	804	307,964	368,020	37,256	9,164	54,653	32,923
June	438	801	307,323	359,039	32,336	9,434	54,419	32,977
May	466	816	296,830	420,300	37,740	10,433	54,278	33,329
April	407	962	295,007	339,583	33,101	8,780	51,967	36,433
March	471	1,023	326,738	320,790	26,758	9,153	57,454	34,898
February	389	889	278,186	287,096	27,473	8,940	52,985	31,957
January	331	861	311,769	321,619	27,044	9,431	55,134	31,252

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Table 2. PRIMARY PRODUCTION (QUANTITY) OF SPECIFIED INDUSTRIAL GASES

Product code	Product description	Unit of measure	January 1986	December 1985	January 19
28132 00	Acetylene[1]	Mil. cu. ft.	342	337	
	Produced for compression, including cylinder and pipeline	do.	82	70	
	Produced for pipeline shipment (excluding that shipped to be compressed) and for consumption in this plant	do.	(S)	(S)	
	Carbon dioxide:				
28133 01	Gas[2]	S. tons	[a]203,900	[a]224,714	208,9
28133 02	Liquid[2]	do.	325,949	322,090	278,5
28133 31	Solid (dry ice)	do.	21,117	20,501	17,5
28137 15	Argon, high purity:				
	Produced for cylinder and bulk delivery and pipeline shipments, and for consumption	Mil. cu. ft.	913	846	
28137 20	Hydrogen[3]	do.	10,069	9,812	7,5
	Liquid and gas:				
	Produced for cylinder and bulk delivery shipment	do.	747	807	
	Produced for pipeline shipment and government use	do.	3,792	3,781	3,6
	Produced for consumption in this plant	do.	5,530	5,224	4,3
28135 00	Nitrogen[4 5]	do.	56,619	55,416	52,4
	Gas:				
	Produced for pipeline shipment	do.	40,093	39,468	36,1
	Produced for consumption in this plant	do.	1,901	1,851	1,8
	Liquid:				
	Produced for bulk delivery shipment to pipeline or to air separation plants	do.	981	[r]971	
	Produced for consumption in this plant	do.	749	[r]513	
	Liquid and gas:				
	Produced for cylinder and bulk delivery shipment	do.	12,895	12,613	12,4
28136 00	Oxygen	do.	32,336	33,011	29,4
	Gas:				
	Produced for pipeline shipment	do.	24,115	23,232	20,4
	Liquid:				
	Produced for bulk shipment to pipelines or to other air separation plants	do.	5,153	6,661	6,4
	Liquid and gas:				
	Produced for cylinder and bulk delivery shipment	do.			
	Produced for consumption in this plant	do.	[a]3,068	[a]3,118	2,4

Note: The percent of estimation of each item is indicated as follows (see "Description of Survey" in the text for a discussion of estimation of missing reports): [a]Over 25 percent of this item is estimated.

[r]Revised by 5 percent or more from previously published figures. (S) Suppressed. Data did not meet publication standards of the Bureau of t Census.

[1]Excludes quantities of acetylene produced and consumed by railroad shops, shipyards, and small establishments using portable generators.

[2]Excludes quantities produced and consumed in plants manufacturing soda ash or urea. Includes gas produced and shipped by ammonia plants using the by-product method, petroleum refineries using the hydrotreating method, and synthetic natural gas plants.

[3]Excludes quantities produced and consumed in the manufacture of methanol and ammonia, but includes an unspecified amount of hydrogen produced f sale or interplant transfer to plants consuming this gas in the production of ammonia. Also excludes amounts of hydrogen produced in petroleum refineries for captive use.

[4]Excludes amount produced and used in the manufacture of ammonia and ammonia derivatives.

[5]Exports of nitrogen amounted to 5,991 m.c.f. in January 1986 and 4,400 m.c.f. in December 1985. Percent of exports to production was 10.6 in January 1986 and 7.9 in December 1985. Source: Bureau of the Census report EX 546, U.S. Exports (Schedule B code 415.2600).

DESCRIPTION OF SURVEY

Scope of Survey. This survey covers firms engaged in the manufacture of industrial gases, including elemental gases, carbon dioxide, and acetylene. Industrial gases vented or used for fuel by the producer are excluded.

Survey Methodology. The statistics in this publication were collected on Bureau of the Census monthly Form M28C, Production of Industrial Gases. The panel for this survey includes all known producers of industrial gases, approximately 725 producers.

Survey Error. Figures for the current month may include estimates for panel members for which reports were not received in time for tabulation. Such missing figures are "imputed" based on month-to-month movements shown by reporting firms. Imputation generally is limited to a maximum of 20 percent for any one data cell. Figures with imputation rates greater than 20 percent are footnoted.

The imputation rate is not an explicit indicator of the potential error in published figures due to nonresponse because the actual monthly movements for nonrespondents may or may not closely agree with the imputed movements. The range of difference between the actual and imputed figures is not precisely known, but is assumed to be small. The degree of uncertainty regarding the accuracy of the published data, however, increases as the percentage of imputation increases. Figures with imputation rates above 20 percent should be used with caution.

Revisions to Previous Period Data. Statistics for previous months may be revised as the result of corrected data from respondents, including the receipt of late reports for which imputations were made as described above. Figures which have been revised by more than 5 percent from previously published figures are indicated by footnotes.

Reporting Period Adjustment. The data are adjusted for the number of working days in the reporting period to compensate for differences in individual company reporting patterns, i.e., calendar month, 4-week, 5-week periods. Since the calendar month accounting system prevails in this industry, adjustments have been made to those reporting on other than a calendar month basis.

EXPLANATION OF TERMS

Production. Data shown for production represent total quantity of each industrial gas produced, including quantity consumed in the plant or sold or transferred to other plants or warehouses of the same company. Products produced under toll agreements are reported by the establishment which owns the raw material from which the products are produced. The data provide a measure of total production, but do not necessarily indicate amounts entering the market since, in some cases, figures are included for material produced as an intermediate process in the production of other end products.

Carbon Dioxide

Gas. Includes all gas produced that is not vented, regardless of whether or not it will be used as a gas or to make liquid in the same plant or in any other plant. Includes natural CO2 produced from well operations. If steam purity is less than 90 percent, the quantity of contained CO2 is included. Excludes amounts produced and consumed in the manufacture of urea or soda ash.

Liquid. Represents all liquid produced, including liquid that will be used to make dry ice.

Dry Ice. Includes all dry ice and pellets produced.

Hydrogen. Excludes amounts used for fuel by the producer; amounts produced and consumed in the manufacture of synthetic ammonia, synthetic methanol, and petroleum products (hydrocracking and hydrotreating); and amounts produced by the ammonia dissociation process (cracking of ammonia). Lower purity hydrogen and pipeline hydrogen sold to industrial gas companies or to substations is reported as produced for cylinder and bulk delivery.

Nitrogen. Excludes amounts produced and consumed in the manufacture of synthetic ammonia and ammonia derivatives.

COMPARISON OF EXPORT, IMPORT, AND DOMESTIC OUTPUT DATA

The Standard Industrial Classification (SIC) system used for domestic output and the statistical export and import commodity classifications were developed independently. This results in considerable difficulty in comparing the three types of data for many commodity areas. The domestic output classification is based on type of industry; on the other hand, the export and import classification system is more materials oriented. Also, there are a substantial number of imported commodities which have no comparable domestic output classification. The relationships shown in this report should be considered only as approximations, since, in addition to the problems mentioned above, there are also the following problems affecting the comparability of the three sets of data.

Valuation. There are different methods of valuation for the three types of data:

- *Domestic Output*. Valued at the point of production. It includes the net sales price, f.o.b. plant, after discounts and allowances, exclusive of freight charges and excise taxes.
- *Exports*. Valued at the point of exportation. It includes the selling price, or cost if not sold, and inland freight, insurance and other charges to the export point.

Estimated producers' values of exports have also been developed. These values more closely approximate the values reported for domestic output because they exclude freight, insurance, and other charges applied from the producing plant to the export point.

- *Imports.* Valued at the first port of entry in the United States. It includes c.i.f. (cost, insurance, and freight), duty, and other charges to the import point.

Duplication in Quantity and Value of Output. Because producers' shipments of some commodities may be used as materials for incorporation into other commodities, combinations of data for such commodities may contain a certain amount of duplication. Thus, percentages of exports to output or imports to apparent consumption (output plus imports minus exports) at four-digit or broader levels may be understated. Where duplication is known to be substantial, the output data are appropriately noted in the table.

Low-Value Export and Import Transactions. Detailed commodity information is not included for individual export shipments valued at not more than $1,000. Generally, detailed commodity information is not included for individual import shipments valued at not more than $1,000. For textiles and textile products, gloves, footwear, and miscellaneous rubber and plastics products, detailed commodity information is not included for individual import shipments valued at not more than $250. This is believed to have only negligible effects on the statistics for the bulk of the commodities.

Manufacturers' Shipments, Not Specified by Kind. The value of manufacturers' shipments at the four-digit industry level often includes a small amount which is not distributed among the individual five-digit product classes. Export and import percentages at the more detailed levels might, therefore, be slightly overstated.

Time Lag Between Output and Exports. There will be a lag between the time a commodity is produced or shipped by the producer and the time it is actually exported, especially when intermediaries (wholesalers, exporters, etc.) are involved. Ordinarily, this type of discrepancy is insignificant in annual figures.

"Direct" vs "Total" Commodity Exports and Imports. Export and import data do not include materials which are incorporated into other more finished products and exported or imported in finished form. Thus, by showing only direct exports and imports, the relation of exports to output and imports to apparent consumption for intermediate products is considerably understated.

Used Commodities. With a few exceptions, used or rebuilt commodities are classified in the same import or export codes as is new merchandise. Percentages are thus overstated to the extent that used or rebuilt products are significant in trade.

Geographic Area of Coverage. Import and export data reflect the movement of merchandise into and out of U.S. foreign trade zones, the U.S. Virgin Islands, and the U.S. customs territory (includes the 50 States, the District of Columbia, and Puerto Rico).

RELATED REPORTS

An annual Current Industrial Report MA28C, *Industrial Gases*, also is published in this series. The annual report summarizes monthly figures and incorporates known revisions in the series for both the current and previous year. It also provides a single reference copy to replace the monthly publications.

The Bureau of the Census publishes the following related reports:

Series	Frequency	Title
Current Industrial Reports		
M28A	Monthly	*Inorganic Chemicals*
M28B	Monthly	*Inorganic Fertilizer*
MA28A	Annually	*Inorganic Chemicals*
MA28B	Annually	*Sulfuric Acid*
Other Industry Reports		
M3-1	Monthly	*Manufactures' Shipments, Inventories, and Orders*
(AS)	Annually	Annual Survey of Manufactures (ASM)
(MC)	Quinquennially	Census of Manufactures
Foreign Trade Reports		
FT410	Monthly	*U.S. Exports—Schedule E— Commodity by Country*
FT135	Monthly	*U.S. General Imports—Schedule A-Commodity by Country*

CONTACTS FOR DATA USERS

Subject Area	Contact	Phone Number
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Manufacturers' Shipments, Inventories, and Orders	Kathleen Menth	(301) 763-2575
Census/ASM	Tom Lee	(301) 763-5152
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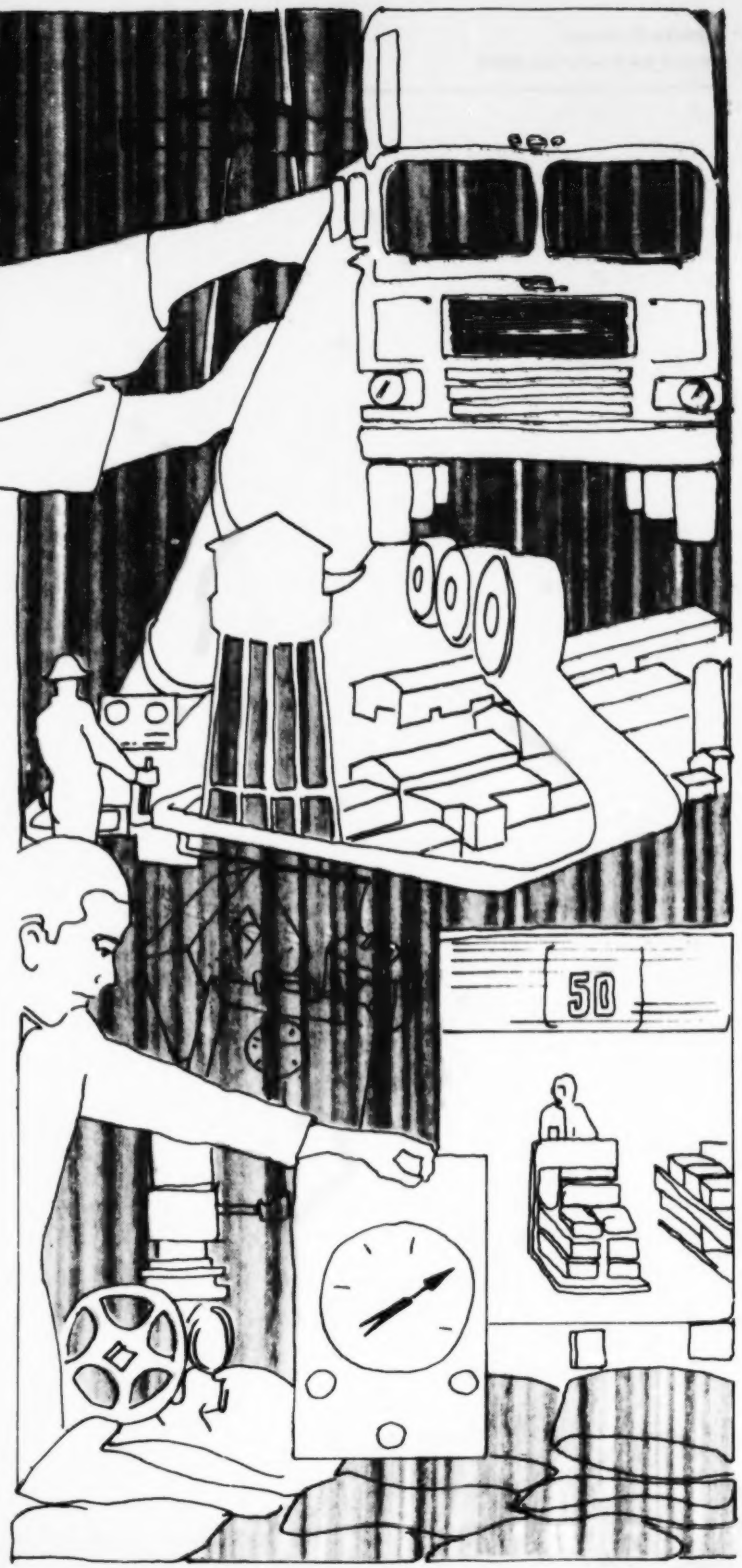

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CURRENT INDUSTRIAL REPORTS

Industrial Gases

U.S. Department of Commerce
BUREAU OF THE CENSUS

FEBRUARY 1986

M28C(86)-2
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Table 1. SUMMARY OF PRODUCTION OF PRINCIPAL GASES: 1984 TO 1986

(Million cubic feet, except as noted)

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			Gas (28133 01)	Liquid (28133 02)	Solid (28133 31)			
1986								
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January	342	913	207,701	332,985	18,583	10,304	56,720	33,852
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Total	4,481	9,548	2,722,506	4,052,018	262,554	106,850	647,030	378,654
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Table 2. PRIMARY PRODUCTION (QUANTITY) OF SPECIFIED INDUSTRIAL GASES

Product code	Product description	Unit of measure	February 1986	January 1986	February 1985
28132 00	Acetylene[1]	M cu ft	327	343	354
	Produced for compression, including cylinder and pipeline	do	35	42	47
	Produced for pipeline shipment (excluding that shipped to be compressed) and for consumption in this plant	do	(S)	(S)	(S)
	Carbon dioxide:				
28133 01	Gas[2]	do	[illegible]	[illegible]	[illegible]
28133 02	Liquid[2]	do	[illegible]	[illegible]	[illegible]
28133 31	Solid (dry ice)	do	[illegible]	[illegible]	[illegible]
28137 15	Argon, high purity:				
	Produced for cylinder and bulk delivery and for consumption	M cu ft	851	913	936
28137 20	Hydrogen[3]	do	[illegible]	[illegible]	[illegible]
	Liquid and gas:				
	Produced for cylinder and bulk delivery s	do	[illegible]	[illegible]	[illegible]
	Produced for pipeline shipment and govern	do	[illegible]	[illegible]	[illegible]
	Produced for consumption in this plant	do	[illegible]	[illegible]	[illegible]
28135 00	Nitrogen[4 5]	do	[illegible]	[illegible]	[illegible]
	Gas:				
	Produced for pipeline shipment	do	[illegible]	[illegible]	[illegible]
	Produced for consumption in this plant	do	[illegible]	[illegible]	[illegible]
	Liquid:				
	Produced for bulk delivery shipment to pi to air separation plants	pipeline or	[illegible]	[illegible]	[illegible]
	Produced for consumption in this plant	do	[illegible]	[illegible]	[illegible]
	Liquid and gas:				
	Produced for cylinder and bulk delivery s	shipment	[illegible]	[illegible]	[illegible]
28136 00	Oxygen	do	[illegible]	[illegible]	[illegible]
	Gas:				
	Produced for pipeline shipment	do	[illegible]	[illegible]	[illegible]
	Liquid:				
	Produced for bulk shipment to pipelines to other air separation plants	do	[illegible]	[illegible]	[illegible]
	Liquid and gas:				
	Produced for cylinder and bulk delivery	shipment	[illegible]	[illegible]	[illegible]
	Produced for consumption in this plant	do	[illegible]	[illegible]	[illegible]

Note: The percent of estimation of each item is indicated as follows (see "Description of Survey" in the text of the January 1986 report, M28C(86)-1, issued March 1986, for a discussion of estimation of missing reports): [illegible]Over 25 percent of this item is estimated.

[r]Revised by 5 percent or more from previously published figures. (S) Suppressed. Data did not meet publication standards of the Bureau of the Census.

[1]Excludes quantities of acetylene produced and consumed by railroad shops, shipyards, and small establishments using portable generators.

[2]Excludes quantities produced and consumed in plants using the by-product method, petroleum refineries using the hydrotreating method, and synthetic natural gas plants.

[3]Excludes quantities produced and consumed in the manufacturing soda ash or urea. Includes gas produced and shipped by ammonia plants using manufacture of methanol and ammonia, but includes an unspecified amount of hydrogen produced for sale or interplant transfer to plants consuming this gas in the production of ammonia. Also excludes amounts of hydrogen produced in petroleum refineries for captive use.

[4]Excludes amount produced and used in the manufacture of ammonia and ammonia derivatives.

[5]Exports of nitrogen amounted to 3,969 m.c.f. in February and 5,991 m.c.f. in January. Percent of exports to production was 7.4 in February and 10.6 in January. Source: Bureau of the Census report FT 546, U.S. Exports (Schedule B code 415.2600).

M28C(86)-3

CURRENT INDUSTRIAL REPORTS

Industrial Gases

U.S. Department of Commerce
BUREAU OF THE CENSUS

MARCH 1986

M28C(86)-3
Issued May 1986

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Table 1. SUMMARY OF PRODUCTION OF PRINCIPAL GASES: 1984 TO 1986

(Million cubic feet, except as noted)

Month and year	Acetylene (68138 000)	Argon, high purity (28137 153)	Carbon dioxide (dry ice) (28133 011)	Carbon dioxide (liquid) (28133 021)	Carbon dioxide (solid) (28133 031)	Hydrogen, high and low purity (gases) (28137 000)	Nitrogen, high and low purity (gases) (28133 000)	Oxygen, high and low purity (gases) (28136 000)
1986								
March	334	923	337,030	334,334	19,080	9,593	51,033	30,340
February	335	861	300,033	308,900	17,211	9,108	53,265	27,305
January	369	913	307,701	332,985	18,583	10,304	56,700	33,850
1985								
Total	3,581	9,348	3,399,309	3,830,018	222,334	108,830	667,030	370,636
December	337	848	288,714	332,080	20,301	9,810	55,619	33,011
November	296	867	317,366	336,733	22,758	9,561	56,865	32,080
October	345	870	328,015	336,686	25,579	9,838	57,988	31,048
September	302	831	285,800	320,367	21,938	7,967	46,333	30,281
August	325	896	283,396	309,359	20,703	8,191	52,821	32,007
July	369	837	253,581	337,113	26,878	8,382	53,010	30,956
June	385	861	238,108	309,114	22,509	9,033	53,041	29,826
May	400	885	201,202	288,011	22,490	9,419	52,791	31,978
April	382	921	235,866	347,077	20,739	8,923	52,172	32,830
March	402	927	253,282	312,674	19,081	9,243	56,801	33,726
February	384	734	198,274	283,863	15,737	8,382	50,821	27,811
January	374	753	208,925	278,568	17,567	7,903	52,660	29,888
1984								
Total	4,948	10,587	3,481,547	4,209,147	355,708	109,359	660,527	385,390
December	443	929	234,188	332,901	20,806	9,925	56,067	29,489
November	450	1,013	264,966	339,309	24,534	8,699	56,979	30,011
October	388	819	277,675	355,818	26,440	8,144	56,714	31,193
September	373	857	270,512	384,138	27,489	8,422	55,071	29,582
August	366	813	310,389	380,534	34,731	8,836	54,826	31,386
July	446	804	307,966	368,020	37,256	9,164	54,653	32,923
June	438	801	307,323	359,039	32,336	9,434	54,419	32,977
May	466	816	296,830	420,300	37,740	10,433	54,278	33,329
April	407	962	295,007	339,583	33,101	8,780	51,967	36,433
March	471	1,023	326,738	320,790	26,758	9,153	57,454	34,898

[r] Revised by 5 percent or more from previously published figures.

Address inquiries concerning these figures to U.S. Department of Commerce, Bureau of the Census, Industry Division, Washington, D.C. 20233, or call Yvonne Baskerville (301) 763-7837.

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Table 3. PRIMARY PRODUCTION (QUANTITY) OF SPECIFIED INDUSTRIAL GASES

Product code	Product description	Unit of measure	March 1986	February 1986	March 1985
28132 00	Acetylene[1]	Mil. cu. ft.	354	324	402
	Produced for compression, including cylinder and pipeline	"	74	73	86
	Produced for pipeline shipment (excluding that shipped to be compressed) and for consumption in this plant	"	(S)	(S)	(S)
	Carbon dioxide:				
28133 01	Gas	Sh. tons	237,026	200,044	253,282
28133 03	Liquid	"	494,394	508,960	512,474
28133 31	Solid (dry ice)	"	18,080	17,211	18,061
28137 13	Argon, high purity:				
	Produced for cylinder and bulk delivery and pipeline shipments, and for consumption	Mil. cu. ft.	933	881	921
28137 20	Nitrogen[2]	"	9,783	9,188	9,243
	Liquid and gas:				
	Produced for cylinder and bulk delivery shipment	"	333	343	343
	Produced for pipeline shipment and government use	"	3,453	3,365	3,790
	Produced for consumption in this plant	"	5,998	5,981	5,909
28133 00	Nitrogen[3,4]	"	57,277	53,285	58,801
	Gas:				
	Produced for pipeline shipment	"	55,868	51,511	57,844
	Produced for consumption in this plant	"	1,390	1,717	1,067
	Liquid:				
	Produced for bulk delivery shipment to pipeline or to air separation plants	"	1,034	1,033	979
	Produced for consumption in this plant	"	885	r781	988
	Liquid and gas:				
	Produced for cylinder and bulk delivery shipment	"	13,358	12,514	13,366
28138 00	Oxygen	"	36,762	32,563	33,724
	Gas:				
	Produced for pipeline shipment	"	24,718	23,299	23,486
	Liquid:				
	Produced for bulk shipment to pipelines or to other air separation plants	"	7,142	6,538	7,687
	Liquid and gas:				
	Produced for cylinder and bulk delivery shipment	"			
	Produced for consumption in this plant	"	[5]2,882	[5]2,726	[5]2,551

Note: The percent of estimation of each item is indicated as follows (see "Description of Survey" in the text of the January 1986 report, M28C(86)-1, issued March 1986, for a discussion of estimation of missing reports): [5]Over 25 percent of this item is estimated.

rRevised by 5 percent or more from previously published figures. (S) Suppressed. Data did not meet publication standards of the Bureau of the Census.

[1]Excludes quantities of acetylene produced and consumed by railroad shops, shipyards, and small establishments using portable generators.
[2]Excludes quantities produced and consumed in plants manufacturing soda ash or urea. Includes gas produced and shipped by ammonia plants using the by-product method, petroleum refineries using the hydrotreating method, and synthetic natural gas plants.
[3]Excludes quantities produced and consumed in the manufacture of methanol and ammonia, but includes an unspecified amount of hydrogen produced for sale or interplant transfer to plants consuming this gas in the production of ammonia. Also excludes amounts of hydrogen produced in petroleum refineries for captive use.
[4]Excludes amount produced and used in the manufacture of ammonia and ammonia derivatives.
[5]Exports of nitrogen amounted to 2,841 m.c.f. in March and 3,969 m.c.f. in February. Percent of exports to production was 5.0 in March and 7.4 in February. Source: Bureau of the Census report EX 546, U.S. Exports (Schedule B code 415.2600).

M28C (84)-4

CURRENT INDUSTRIAL REPORTS

Industrial Gases

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U.S. Department of Commerce
BUREAU OF THE CENSUS

APRIL 1986

M28C(86)-4
Issued June 1986

The statistics in this publication are based on a survey of manufacturers and represent total U.S. shipments of industrial gases (excluded are industrial gases vented or used for fuel for the producer). Estimates are included for companies whose reports were not received in time for tabulation. A description of the survey methodology and related information may be found in January 1986 report for this series M28C(86)-1, issued March 1986.

Table 1. SUMMARY OF PRODUCTION OF PRINCIPAL GASES: 1984 TO 1986

(Million cubic feet, except as noted)

Month and year	Acetylene (gas)	Argon, high purity (liquid)	Carbon dioxide (dry ice sold)			Hydrogen, high and low purity (liquid)	Nitrogen, high and low purity (liquid)	Oxygen, high and low purity (liquid)
			gas	liquid	solid			
1986								
April	336	918	241,000	240,000	200,000	10,000	53,000	53,500
March	344	924	247,000	250,000	210,000	9,900	57,000	54,000
February	329	861	200,000	208,000	170,000	9,100	53,000	52,000
January	353	913	207,701	230,000	180,000	10,000	56,000	53,000
1985								
Total	4,381	9,348	2,733,306	2,853,018	2,053,555	108,000	657,000	578,000
November	337	868	205,000	220,000	170,000	9,000	55,000	53,000
December	396	947	217,000	250,000	180,000	9,500	56,000	54,000
October	410	970	226,000	250,000	190,000	9,800	57,000	54,000
September	382	841	215,000	240,000	180,000	9,000	55,000	52,000
August	425	896	243,000	265,000	200,000	9,500	56,000	53,000
July	369	897	233,000	257,000	190,000	9,000	53,000	50,000
June	385	861	236,000	269,000	200,000	9,000	53,000	50,000
May	400	885	201,000	268,000	200,000	9,000	52,000	51,000
April	382	921	235,000	267,000	200,000	9,000	52,000	52,000
March	402	927	253,000	312,000	190,000	9,000	56,000	53,000
February	384	756	198,000	265,000	150,000	8,000	50,000	47,000
January	376	753	208,000	278,000	170,000	7,000	52,000	49,000
1984								
Total	4,988	10,587	3,481,547	4,209,167	355,708	109,359	680,527	385,390
December	443	929	234,188	332,901	20,806	9,929	56,047	29,489
November	450	1,013	264,966	339,309	24,534	8,699	56,979	30,011
October	388	819	277,675	355,818	26,440	8,144	58,714	31,153
September	373	857	270,512	384,138	27,489	8,422	55,071	29,582
August	366	813	310,389	380,534	34,731	8,834	54,826	31,386
July	446	804	307,964	368,020	37,256	9,164	54,653	32,923
June	438	801	307,323	359,039	32,336	9,434	54,419	32,977
May	466	816	296,830	420,300	37,740	10,433	54,278	33,329
April	407	962	295,007	339,583	33,101	8,780	51,967	36,433

Note: The percent of estimation of each item is indicated as follows (see "Description of Survey" in the text of the January 1986 report, M28C(86)-1, issued March 1986, for a discussion of estimation of missing reports): [illegible] Over 25 percent of this item is estimated.

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Table 2. PRIMARY PRODUCTION (QUANTITY) OF SPECIFIED INDUSTRIAL GASES

Product code	Product description	Unit of measure	April 1986	March 1986	April 1985
28132 00	Acetylene[1]	Mil. cu. ft.	336	354	382
	Produced for compression, including cylinder and pipeline	..do..	76	74	88
	Produced for pipeline shipment (excluding that shipped to be compressed) and for consumption in this plant	..do..	(S)	(S)	(S)
	Carbon dioxide:				
28133 01	Gas[2]	S. tons	251,042	247,667	235,866
28133 02	Liquid[2]	..do..	a338,045	332,779	347,077
28133 31	Solid (dry ice)	..do..	a20,929	19,013	20,733
28137 15	Argon, high purity: Produced for cylinder and bulk delivery and pipeline shipments, and for consumption	Mil. cu. ft.	919	924	921
28137 20	Hydrogen[3]	..do..	10,048	9,818	8,923
	Liquid and gas:				
	Produced for cylinder and bulk delivery shipment	..do..	762	772	651
	Produced for pipeline shipment and government use	..do..	3,930	3,856	3,656
	Produced for consumption in this plant	..do..	5,356	5,190	4,616
28135 00	Nitrogen[4 5]	..do..	55,658	57,226	52,172
	Gas:				
	Produced for pipeline shipment	..do..	39,027	40,684	36,221
	Produced for consumption in this plant	..do..	1,759	1,540	1,705
	Liquid:				
	Produced for bulk delivery shipment to pipeline or to air separation plants	..do..	1,090	1,054	946
	Produced for consumption in this plant	..do..	671	683	520
	Liquid and gas:				
	Produced for cylinder and bulk delivery shipment	..do..	13,111	13,265	12,780
28136 00	Oxygen	..do..	33,528	34,725	32,650
	Gas:				
	Produced for pipeline shipment	..do..	24,109	24,718	23,160
	Liquid:				
	Produced for bulk shipment to pipelines or to other air separation plants	..do..	6,709	7,082	7,167
	Liquid and gas:				
	Produced for cylinder and bulk delivery shipment	..do..			
	Produced for consumption in this plant	..do..	a2,735	a2,882	a2,323

Note: The percent of estimation of each item is indicated as follows (see "Description of Survey" in the text of the January 1986 report, M28C(86)-1, issued March 1986, for a discussion of estimation of missing reports): aOver 25 percent of this item is estimated.

(S) Suppressed. Data did not meet publication standards of the Bureau of the Census.

[1]Excludes quantities of acetylene produced and consumed by railroad shops, shipyards, and small establishments using portable generators.
[2]Excludes quantities produced and consumed in plants manufacturing soda ash or urea. Includes gas produced and shipped by ammonia plants using the by-product method, petroleum refineries using the hydrotreating method, and synthetic natural gas plants.
[3]Excludes quantities produced and consumed in the manufacture of methanol and ammonia, but includes an unspecified amount of hydrogen produced for sale or interplant transfer to plants consuming this gas in the production of ammonia. Also excludes amounts of hydrogen produced in petroleum refineries for captive use.
[4]Excludes amount produced and used in the manufacture of ammonia and ammonia derivatives.
[5]Exports of nitrogen amounted to 3,670 m.c.f. in April and 2,841 m.c.f. in March. Percent of exports to production was 6.6 in April and 5.0 in March. Source: Bureau of the Census report EX 546, U.S. Exports (Schedule B code 415.2600).

M 28C (86)-5

CURRENT INDUSTRIAL REPORTS

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Industrial Gases

U.S. Department of Commerce
BUREAU OF THE CENSUS

MAY 1986

M28C(86)-5
Issued July 1986

The statistics in this publication are based on a survey of manufacturers and represent total U.S. shipments of industrial gases (excluded are industrial gases vented or used for fuel for the producer). Estimates are included for companies whose reports were not received in time for tabulation. A description of the survey methodology and related information may be found in January 1986 report for this series M28C(86)-1, issued March 1986.

Table 1. SUMMARY OF PRODUCTION OF PRINCIPAL GASES: 1984 TO 1986

(Million cubic feet, except as noted)

Month and year	Acetylene (28132 00)	Argon, high purity (28137 15)	Carbon dioxide (short tons)			Hydrogen, high and low purity (100%) (28137 20)	Nitrogen, high and low purity (100%) (28135 00)	Oxygen, high and low purity (100%) (28136 00)
			Gas (28133 01)	Liquid (28133 02)	Solid (28133 31)			
1986								
May	440	941	261,223	[a]343,913	[a]21,704	9,823	59,096	34,669
April	339	918	246,621	326,516	20,601	10,048	55,731	33,456
March	354	924	247,667	332,779	19,013	9,818	57,226	34,725
February	324	891	200,044	308,960	17,211	9,488	53,285	32,563
January	342	913	207,701	332,985	18,583	10,304	56,720	33,852
1985								
Total	4,481	9,548	2,722,506	4,052,018	262,554	106,850	647,030	378,654
December	337	846	224,714	322,090	20,501	9,812	55,416	33,011
November	296	847	217,346	339,723	22,759	9,541	54,845	32,080
October	345	870	226,214	356,486	23,579	9,858	57,989	32,048
September	382	831	225,400	340,347	23,958	7,967	55,453	32,281
August	425	894	243,594	395,352	26,762	8,191	54,421	32,407
July	369	837	253,581	357,113	26,878	8,362	53,010	30,954
June	385	861	236,108	369,114	22,509	9,053	53,051	29,824
May	400	885	201,202	368,011	22,490	9,415	52,791	31,976
April	382	921	235,866	347,077	20,733	8,923	52,172	32,650
March	402	927	253,282	312,474	19,061	9,243	54,601	33,724
February	384	754	196,274	265,663	15,757	8,582	50,821	27,811
January	374	753	208,925	278,568	17,567	7,903	52,460	29,888
1984								
Total	4,968	10,587	3,481,547	4,209,147	355,708	109,359	660,527	385,390
December	443	929	234,188	332,901	20,806	9,925	56,047	29,489
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October	388	819	277,675	355,818	26,440	8,144	56,714	31,153
September	373	857	270,512	384,138	27,489	8,422	55,071	29,582
August	366	813	310,389	380,534	34,731	8,834	54,826	31,386
July	446	804	307,964	368,020	37,256	9,164	54,653	32,923
June	438	801	307,323	359,039	32,336	9,434	54,419	32,977
May	466	816	296,830	420,300	37,740	10,433	54,278	33,329

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Table 2. PRIMARY PRODUCTION (QUANTITY) OF SPECIFIED INDUSTRIAL GASES

Product code	Product description	Unit of measure	May 1986	April 1986	May 1985
28132 00	Acetylene[1]	Mil. cu. ft.	410	339	400
	Produced for compression, including cylinder and pipeline	do.	72	76	79
	Produced for pipeline shipment (excluding that shipped to be compressed) and for consumption in this plant	do.	(S)	(S)	(S)
	Carbon dioxide:				
28133 01	Gas[2]	S. tons	[a]261,223	[a]246,621	201,202
28133 02	Liquid[2]	do.	[a]343,913	[a]326,516	368,011
28133 31	Solid (dry ice)	do.	[a]21,704	20,601	22,490
28137 15	Argon, high purity: Produced for cylinder and bulk delivery and pipeline shipments, and for consumption	Mil. cu. ft.	941	918	885
28137 20	Hydrogen[3]	do.	9,823	10,048	9,415
	Liquid and gas:				
	Produced for cylinder and bulk delivery shipment	do.	794	762	780
	Produced for pipeline shipment and government use	do.	3,519	3,930	3,487
	Produced for consumption in this plant	do.	5,510	5,356	5,148
28135 00	Nitrogen[4 5]	do.	59,095	55,731	52,791
	Gas:				
	Produced for pipeline shipment	do.	39,709	39,023	36,163
	Produced for consumption in this plant	do.	1,856	1,759	1,819
	Liquid:				
	Produced for bulk delivery shipment to pipeline or to air separation plants	do.	1,251	1,090	999
	Produced for consumption in this plant	do.	653	671	477
	Liquid and gas:				
	Produced for cylinder and bulk delivery shipment	do.	15,626	13,188	13,333
28136 00	Oxygen	do.	34,669	33,456	31,976
	Gas:				
	Produced for pipeline shipment	do.	24,875	24,114	22,042
	Liquid:				
	Produced for bulk shipment to pipelines or to other air separation plants	do.	6,775	6,607	7,607
	Liquid and gas:				
	Produced for cylinder and bulk delivery shipment	do.	[a]3,019	[a]2,735	[a]2,237
	Produced for consumption in this plant	do.			

Note: The percent of estimation of each item is indicated as follows (see "Description of Survey" in the text of the January 1986 report, M28C(86)-1, issued March 1986, for a discussion of estimation of missing reports): [a]Over 25 percent of this item is estimated.

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[1]Excludes quantities of acetylene produced and consumed by railroad shops, shipyards, and small establishments using portable generators.
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[3]Excludes quantities produced and consumed in the manufacture of methanol and ammonia, but includes an unspecified amount of hydrogen produced for sale or interplant transfer to plants consuming this gas in the production of ammonia. Also excludes amounts of hydrogen produced in petroleum refineries for captive use.
[4]Excludes amount produced and used in the manufacture of ammonia and ammonia derivatives.
[5]Exports of nitrogen amounted to 3,270 m.c.f. in May and 3,670 m.c.f. in April. Percent of exports to production was 5.5 in May and 6.6 in April. Source: Bureau of the Census report EX 546, U.S. Exports (Schedule B code 415.2600).

M28C(86)-6

CURRENT INDUSTRIAL REPORTS

Industrial Gases

U.S. Department of Commerce
BUREAU OF THE CENSUS

JUNE 1986

M28C(86)-6
Issued September 1986

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Table 1. SUMMARY OF PRODUCTION OF PRINCIPAL GASES: 1984 TO 1986

(Million cubic feet, except as noted)

Month and year	Acetylene (28132 00)	Argon, high purity (28137 15)	Carbon dioxide (short tons)			Hydrogen, high and low purity (100%) (28137 20)	Nitrogen, high and low purity (100%) (28135 00)	Oxygen, high and low purity (100%) (28136 00)
			Gas (28133 01)	Liquid (28133 02)	Solid (28133 31)			
1986								
June	r358	868	[a]r207,279	347,328	25,132	10,167	55,122	32,024
May	r403	938	r243,771	354,079	22,512	9,783	57,009	34,050
April	339	918	246,621	326,516	20,601	10,048	55,731	33,456
March	354	924	247,667	332,779	19,013	9,818	57,226	34,725
February	324	891	200,044	308,960	17,211	9,488	53,285	32,563
January	342	913	207,701	332,985	18,583	10,304	56,720	33,852
1985								
Total	4,481	9,548	2,722,506	4,052,018	262,554	106,850	647,030	378,654
December	337	846	224,714	322,090	20,501	9,812	55,416	33,011
November	296	847	217,346	339,723	22,759	9,541	54,845	32,080
October	345	870	226,214	356,486	23,579	9,858	57,989	32,048
September	382	831	225,400	340,347	23,958	7,967	55,453	32,281
August	425	894	243,594	395,352	26,762	8,191	54,421	32,407
July	369	837	253,581	357,113	26,878	8,362	53,010	30,954
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PERMIT No. G-58

Table 2. PRIMARY PRODUCTION (QUANTITY) OF SPECIFIED INDUSTRIAL GASES

Product code	Product description	Unit of measure	June 1986	May 1986	June 1985
28132 00	Acetylene[1]	Mil. cu. ft.	358	403	385
	Produced for compression, including cylinder and pipeline	do.	65	72	65
	Produced for pipeline shipment (excluding that shipped to be compressed) and for consumption in this plant	do.	(S)	(S)	(S)
	Carbon dioxide:				
28133 01	Gas[2]	S. tons	[a]207,279	[r]243,771	236,108
28133 02	Liquid[2]	do.	347,328	354,079	369,114
28133 31	Solid (dry ice)	do.	25,132	22,512	22,509
28137 15	Argon, high purity:				
	Produced for cylinder and bulk delivery and pipeline shipments, and for consumption	Mil. cu. ft.	868	938	861
28137 20	Hydrogen[3]	do.	10,167	9,783	9,053
	Liquid and gas:				
	Produced for cylinder and bulk delivery shipment	do.	785	794	822
	Produced for pipeline shipment and government use	do.	3,360	3,479	3,463
	Produced for consumption in this plant	do.	6,022	5,510	4,768
28135 00	Nitrogen[4 5]	do.	55,122	57,009	53,051
	Gas:				
	Produced for pipeline shipment	do.	38,151	39,805	36,644
	Produced for consumption in this plant	do.	1,701	1,856	1,670
	Liquid:				
	Produced for bulk delivery shipment to pipeline or to air separation plants	do.	1,072	[r]1,187	996
	Produced for consumption in this plant	do.	697	653	592
	Liquid and gas:				
	Produced for cylinder and bulk delivery shipment	do.	13,501	[r]13,508	13,149
28136 00	Oxygen	do.	32,024	34,050	29,824
	Gas:				
	Produced for pipeline shipment	do.	22,829	24,868	20,814
	Liquid:				
	Produced for bulk shipment to pipelines or to other air separation plants	do.	6,735	6,852	7,102
	Liquid and gas:				
	Produced for cylinder and bulk delivery shipment	do.			
	Produced for consumption in this plant	do.	2,460	[r]2,330	[a]1,908

Note: The percent of estimation of each item is indicated as follows (see "Description of Survey" in the text of the January 1986 report, M28C(86)-1, issued March 1986, for a discussion of estimation of missing reports): [a]Over 25 percent of this item is estimated.

[r]Revised by 5 percent or more from previously published figures. (S) Suppressed. Data did not meet publication standards of the Bureau of the Census.

[1]Excludes quantities of acetylene produced and consumed by railroad shops, shipyards, and small establishments using portable generators.
[2]Excludes quantities produced and consumed in plants manufacturing soda ash or urea. Includes gas produced and shipped by ammonia plants using the by-product method, petroleum refineries using the hydrotreating method, and synthetic natural gas plants.
[3]Excludes quantities produced and consumed in the manufacture of methanol and ammonia, but includes an unspecified amount of hydrogen produced for sale or interplant transfer to plants consuming this gas in the production of ammonia. Also excludes amounts of hydrogen produced in petroleum refineries for captive use.
[4]Excludes amount produced and used in the manufacture of ammonia and ammonia derivatives.
[5]Exports of nitrogen amounted to 4,186 m.c.f. in June and 3,270 m.c.f. in May. Percent of exports to production was 7.6 in June and 5.7 in May. Source: Bureau of the Census report, EX 546, U.S. Exports (Schedule B code 415.2600).

M28C(86)-7

CURRENT INDUSTRIAL REPORTS

Industrial Gases

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U.S. Department of Commerce
BUREAU OF THE CENSUS

JULY 1986

M28C(86)-7
Issued September 1986

The statistics in this publication are based on a survey of manufacturers and represent total U.S. shipments of industrial gases (excluded are industrial gases vented or used for fuel for the producer). Estimates are included for companies whose reports were not received in time for tabulation. A description of the survey methodology and related information may be found in January 1986 report for this series M28C(86)-1, issued March 1986.

Table 1. SUMMARY OF PRODUCTION OF PRINCIPAL GASES: 1984 TO 1986

(Million cubic feet, except as noted)

Month and year	Acetylene (28132 00)	Argon, high purity (28137 15)	Carbon dioxide (short tons)			Hydrogen, high and low purity (100%) (28137 20)	Nitrogen, high and low purity (100%) (28135 00)	Oxygen, high and low purity (100%) (28136 00)
			Gas (28133 01)	Liquid (28133 02)	Solid (28133 31)			
1986								
July	345	881	a240,937	307,989	24,237	10,587	55,077	33,197
June	359	868	201,321	344,804	23,880	10,181	54,899	32,419
May	403	938	243,771	354,079	22,512	9,783	57,009	34,050
April	339	918	246,621	326,516	20,601	10,048	55,731	33,456
March	354	924	247,667	332,779	19,013	9,818	57,226	34,725
February	324	891	200,044	308,960	17,211	9,488	53,285	32,563
January	342	913	207,701	332,985	18,583	10,304	56,720	33,852
1985								
Total	4,481	9,548	2,722,506	4,052,018	262,554	106,850	647,030	378,654
December	337	846	224,714	322,090	20,501	9,812	55,416	33,011
November	296	847	217,346	339,723	22,759	9,541	54,845	32,080
October	345	870	226,214	356,486	23,579	9,858	57,989	32,048
September	382	831	225,400	340,347	23,958	7,967	55,453	32,281
August	425	894	243,594	395,352	26,762	8,191	54,421	32,407
July	369	837	253,581	357,113	26,878	8,362	53,010	30,954
June	385	861	236,108	369,114	22,509	9,053	53,051	29,824
May	400	885	201,202	368,011	22,490	9,415	52,791	31,976
April	382	921	235,866	347,077	20,733	8,923	52,172	32,650
March	402	927	253,282	312,474	19,061	9,243	54,601	33,724
February	384	754	196,274	265,663	15,757	8,582	50,821	27,811
January	374	753	208,925	278,568	17,567	7,903	52,460	29,888
1984								
Total	4,968	10,587	3,481,547	4,209,147	355,708	109,359	660,527	385,390
December	443	929	234,188	332,901	20,806	9,925	56,047	29,489
November	450	1,013	264,966	339,309	24,534	8,699	56,979	30,011
October	388	819	277,675	355,818	26,440	8,144	56,714	31,153
September	373	857	270,512	384,138	27,489	8,422	55,071	29,582
August	366	813	310,389	380,534	34,731	8,834	54,826	31,386
July	446	804	307,964	368,020	37,256	9,164	54,653	32,923

Note: The percent of estimation of each item is indicated as follows (see "Description of Survey" in the text of the January 1986 report, M28C(86)-1, issued March 1986, for a discussion of estimation of missing reports): aOver 25 percent of this item is estimated.

Address inquiries concerning these figures to U.S. Department of Commerce, Bureau of the Census, Industry Division, Washington, D.C. 20233, or call Yvonne Baskerville (301) 763-7837.

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Table 2. PRIMARY PRODUCTION (QUANTITY) OF SPECIFIED INDUSTRIAL GASES

Product code	Product description	Unit of measure	July 1986	June 1986	July 1985
28132 00	Acetylene[1]	Mil. cu. ft.	345	359	369
	Produced for compression, including cylinder and pipeline	..do..	62	65	63
	Produced for pipeline shipment (excluding that shipped to be compressed) and for consumption in this plant	..do..	(S)	(S)	(S)
	Carbon dioxide:				
28133 01	Gas[2]	S. tons	[a]240,937	201,321	253,581
28133 02	Liquid[2]	..do..	307,989	344,804	357,113
28133 91	Solid (dry ice)	..do..	24,237	23,880	26,878
28137 15	Argon, high purity:				
	Produced for cylinder and bulk delivery and pipeline shipments, and for consumption	Mil. cu. ft.	881	868	837
28137 20	Hydrogen[3]	..do..	10,587	10,181	8,362
	Liquid and gas:				
	Produced for cylinder and bulk delivery shipment	..do..	734	785	623
	Produced for pipeline shipment and government use	..do..	3,704	3,360	3,408
	Produced for consumption in this plant	..do..	6,149	6,036	4,331
28135 00	Nitrogen[4 5]	..do..	55,077	54,899	53,010
	Gas:				
	Produced for pipeline shipment	..do..	38,396	38,204	36,685
	Produced for consumption in this plant	..do..	1,564	[r]1,570	1,849
	Liquid:				
	Produced for bulk delivery shipment to pipeline or to air separation plants	..do..	1,221	1,104	920
	Produced for consumption in this plant	..do..	684	699	546
	Liquid and gas:				
	Produced for cylinder and bulk delivery shipment	..do..	13,212	13,322	13,010
28136 00	Oxygen	..do..	33,197	32,419	30,954
	Gas:				
	Produced for pipeline shipment	..do..	24,339	23,241	21,879
	Liquid:				
	Produced for bulk shipment to pipelines or to other air separation plants	..do..	6,415	6,718	6,356
	Liquid and gas:				
	Produced for cylinder and bulk delivery shipment	..do..			
	Produced for consumption in this plant	..do..	2,443	2,460	2,719

Note: The percent of estimation of each item is indicated as follows (see "Description of Survey" in the text of the January 1986 report, M28C(86)-1, issued March 1986, for a discussion of estimation of missing reports): [a]Over 25 percent of this item is estimated.

[r]Revised by 5 percent or more from previously published figures. (S) Suppressed. Data did not meet publication standards of the Bureau of the Census.

[1]Excludes quantities of acetylene produced and consumed by railroad shops, shipyards, and small establishments using portable generators.
[2]Excludes quantities produced and consumed in plants manufacturing soda ash or urea. Includes gas produced and shipped by ammonia plants using the by-product method, petroleum refineries using the hydrotreating method, and synthetic natural gas plants.
[3]Excludes quantities produced and consumed in the manufacture of methanol and ammonia, but includes an unspecified amount of hydrogen produced for sale or interplant transfer to plants consuming this gas in the production of ammonia. Also excludes amounts of hydrogen produced in petroleum refineries for captive use.
[4]Excludes amount produced and used in the manufacture of ammonia and ammonia derivatives.
[5]Exports of nitrogen amounted to 7,098 m.c.f. in July and 4,186 m.c.f. in June. Percent of exports to production was 12.9 in July and 7.6 in June. Source: Bureau of the Census report, EX 546, U.S. Exports (Schedule B code 415.2600).

M 28 C(86)-8

CURRENT INDUSTRIAL REPORTS

Industrial Gases

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AUGUST 1986

M28C(86)-8
Issued November 1986

The statistics in this publication are based on a survey of manufacturers and represent total U.S. shipments of industrial gases (excluded are industrial gases vented or used for fuel for the producer). Estimates are included for companies whose reports were not received in time for tabulation. A description of the survey methodology and related information may be found in January 1986 report for this series M28C(86)-1, issued March 1986.

Table 1. SUMMARY OF PRODUCTION OF PRINCIPAL GASES: 1984 TO 1986

(Million cubic feet, except as noted)

Month and year	Acetylene (28132 00)	Argon, high purity (28137 15)	Carbon dioxide (short tons)			Hydrogen, high and low purity (100%) (28137 20)	Nitrogen, high and low purity (100%) (28135 00)	Oxygen, high and low purity (100%) (28136 00)
			Gas (28133 01)	Liquid (28133 02)	Solid (28133 31)			
1986								
August	429	901	[a]262,067	377,357	22,087	9,913	57,070	32,940
July	344	881	234,796	307,376	23,958	10,602	55,111	33,267
June	359	868	201,321	344,804	23,880	10,181	54,899	32,419
May	403	938	243,771	354,079	22,512	9,783	57,009	34,050
April	339	918	246,621	326,516	20,601	10,048	55,731	33,456
March	354	924	247,667	332,779	19,013	9,818	57,226	34,725
February	324	891	200,044	308,960	17,211	9,488	53,285	32,563
January	342	913	207,701	332,985	18,583	10,304	56,720	33,852
1985[r]								
Total	5,051	10,935	3,835,361	4,243,459	379,592	121,345	655,190	392,554
December	437	905	316,569	337,779	29,959	11,143	47,321	34,168
November	327	906	306,189	356,271	33,192	10,848	57,275	33,223
October	381	930	318,681	373,850	34,366	11,192	60,565	33,191
September	433	889	317,534	356,925	34,909	9,032	57,921	33,481
August	484	956	343,165	414,609	38,924	9,295	56,818	33,542
July	411	895	357,235	374,507	39,090	9,504	55,354	32,081
June	430	921	332,619	381,160	32,235	10,278	55,405	30,994
May	444	946	283,445	385,936	32,207	10,688	55,112	33,161
April	423	985	332,278	363,983	29,691	10,141	54,491	33,931
March	446	991	356,814	327,695	27,297	10,497	57,041	34,982
February	424	806	276,505	278,605	22,565	9,749	53,073	28,840
January	411	805	294,327	292,139	25,157	8,978	54,814	30,960
1984[r]								
Total	4,974	10,257	3,676,587	3,915,356	352,583	112,790	651,654	386,615
December	343	901	247,307	309,655	20,432	9,379	55,287	29,170
November	451	981	279,809	315,625	24,714	8,133	56,225	29,711
October	488	793	293,230	330,982	26,587	8,587	55,919	30,846
September	373	830	285,666	357,325	27,618	8,905	54,312	29,298
August	366	788	327,777	353,973	34,735	9,322	54,092	31,085
July	446	779	326,216	342,342	37,217	9,549	53,887	32,567

Note: The percent of estimation of each item is indicated as follows (see "Description of Survey" in the text of the January 1986 report, M28C(86)-1, issued March 1986, for a discussion of estimation of missing reports): [a]Over 25 percent of this item is estimated.

[r]Revised based on comparison of figures from monthly report M28C with 1985 report, Industrial Gases, MA28C(85)-1, issued October 1986.

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Table 2. PRIMARY PRODUCTION (QUANTITY) OF SPECIFIED INDUSTRIAL GASES

Product code	Product description	Unit of measure	August 1986	July 1986	August 1985
28132 00	Acetylene[1]	Mil. cu. ft.	429	344	501
	Produced for compression, including cylinder and pipeline	..do.	64	62	147
	Produced for pipeline shipment (excluding that shipped to be compressed) and for consumption in this plant	..do.	(S)	(S)	(S)
	Carbon dioxide:				
28133 01	Gas[2]	S. tons	[a]262,067	234,796	243,594
28133 02	Liquid[2]	..do.	377,357	307,376	395,352
28133 31	Solid (dry ice)	..do.	22,087	23,958	26,762
28137 15	Argon, high purity: Produced for cylinder and bulk delivery and pipeline shipments, and for consumption	Mil. cu. ft.	901	881	894
28137 20	Hydrogen[3]	..do.	9,913	10,602	8,191
	Liquid and gas:				
	Produced for cylinder and bulk delivery shipment	..do.	775	734	826
	Produced for pipeline shipment and government use	..do.	3,662	3,704	3,042
	Produced for consumption in this plant	..do.	5,476	6,164	4,323
28135 00	Nitrogen[4 5]	..do.	57,070	55,111	54,421
	Gas:				
	Produced for pipeline shipment	..do.	39,804	38,360	37,458
	Produced for consumption in this plant	..do.	1,590	1,562	1,953
	Liquid:				
	Produced for bulk delivery shipment to pipeline or to air separation plants	..do.	1,174	1,221	910
	Produced for consumption in this plant	..do.	707	684	614
	Liquid and gas:				
	Produced for cylinder and bulk delivery shipment	..do.	13,795	13,284	13,486
28136 00	Oxygen	..do.	32,940	33,267	32,407
	Gas:				
	Produced for pipeline shipment	..do.	24,011	24,389	22,275
	Liquid:				
	Produced for bulk shipment to pipelines or to other air separation plants	..do.	6,543	6,435	7,383
	Liquid and gas:				
	Produced for cylinder and bulk delivery shipment	..do.			
	Produced for consumption in this plant	..do.	2,386	2,443	2,749

Note: The percent of estimation of each item is indicated as follows (see "Description of Survey" in the text of the January 1986 report, M28C(86)-1, issued March 1986, for a discussion of estimation of missing reports): [a]Over 25 percent of this item is estimated.

(S) Suppressed. Data did not meet publication standards of the Bureau of the Census.

[1]Excludes quantities of acetylene produced and consumed by railroad shops, shipyards, and small establishments using portable generators.
[2]Excludes quantities produced and consumed in plants manufacturing soda ash or urea. Includes gas produced and shipped by ammonia plants using the by-product method, petroleum refineries using the hydrotreating method, and synthetic natural gas plants.
[3]Excludes quantities produced and consumed in the manufacture of methanol and ammonia, but includes an unspecified amount of hydrogen produced for sale or interplant transfer to plants consuming this gas in the production of ammonia. Also excludes amounts of hydrogen produced in petroleum refineries for captive use.
[4]Excludes amount produced and used in the manufacture of ammonia and ammonia derivatives.
[5]Exports of nitrogen amounted to 3,097 m.c.f. in August and 7,098 m.c.f. in July. Percent of exports to production was 5.4 in August and 12.9 in July. Source: Bureau of the Census report, EX 546, U.S. Exports (Schedule B code 415.2600).

C 28C(86)-9

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SEPTEMBER 1986

M28C(86)-8
Issued November 1986

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The statistics in this publication are based on a survey of manufacturers and represent total U.S. shipments of industrial gases (excluded are industrial gases vented or used for fuel for the producer). Estimates are included for companies whose reports were not received in time for tabulation. A description of the survey methodology and related information may be found in January 1986 report for this series M28C(86)-1, issued March 1986.

Table 1. SUMMARY OF PRODUCTION OF PRINCIPAL GASES: 1984 TO 1986

(Million cubic feet, except as noted)

Month and year	Acetylene (28132 00)	Argon, high purity (28137 15)	Carbon dioxide (short tons)			Hydrogen, high and low purity (100%) (28137 20)	Nitrogen, high and low purity (100%) (28135 00)	Oxygen, high and low purity (100%) (28136 00)
			Gas (28133 01)	Liquid (28133 02)	Solid (28133 31)			
1986								
September	427	892	[a]231,793	356,790	23,614	10,494	54,651	33,030
August	433	901	273,307	376,337	22,087	9,934	56,902	32,943
July	344	881	234,796	307,376	23,958	10,602	55,111	33,267
June	359	868	201,321	344,804	23,880	10,181	54,899	32,419
May	403	938	243,771	354,079	22,512	9,783	57,009	34,050
April	339	918	246,621	326,516	20,601	10,048	55,731	33,456
March	354	924	247,667	332,779	19,013	9,818	57,226	34,725
February	324	891	200,044	308,960	17,211	9,488	53,285	32,563
January	342	913	207,701	332,985	18,583	10,304	56,720	33,852
1985								
Total	5,051	10,935	3,835,361	4,243,459	379,592	121,345	655,190	392,554
December	437	905	316,569	337,779	29,959	11,143	47,321	34,168
November	327	906	306,189	356,271	33,192	10,848	57,275	33,223
October	381	930	318,681	373,850	34,366	11,192	60,565	33,191
September	433	889	317,534	356,925	34,909	9,032	57,921	33,481
August	484	956	343,165	414,609	38,924	9,295	56,818	33,542
July	411	895	357,235	374,507	39,090	9,504	55,354	32,081
June	430	921	332,619	381,160	32,235	10,278	55,405	30,994
May	444	946	283,445	385,936	32,207	10,688	55,112	33,161
April	423	985	332,278	363,983	29,691	10,141	54,491	33,931
March	446	991	356,814	327,695	27,297	10,497	57,041	34,982
February	424	806	276,505	278,605	22,565	9,749	53,073	28,840
January	411	805	294,327	292,139	25,157	8,978	54,814	30,960
1984								
Total	4,974	10,257	3,676,587	3,915,356	352,583	112,790	651,654	386,615
December	343	901	247,307	309,655	20,432	9,379	55,287	29,170
November	451	981	279,809	315,625	24,714	8,133	56,225	29,711
October	488	793	293,230	330,982	26,587	8,587	55,919	30,846
September	373	830	285,666	357,325	27,618	8,905	54,312	29,298
August	366	788	327,777	353,973	34,735	9,322	54,092	31,085
July	446	779	326,216	342,342	37,217	9,549	53,887	32,567

Note: The percent of estimation of each item is indicated as follows (see "Description of Survey" in the text of the January 1986 report, M28C(86)-1, issued March 198 , for a discussion of estimation of missing reports): [a]Over 25 percent of this item is estimated.

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Table 2. PRIMARY PRODUCTION (QUANTITY) OF SPECIFIED INDUSTRIAL GASES

Product code	Product description	Unit of measure	September 1986	August 1986	September 1985
28132 00	Acetylene[1]	Mil. cu. ft.	427	423	382
	Produced for compression, including cylinder and pipeline	do	75	r68	78
	Produced for pipeline shipment (excluding that shipped to be compressed) and for consumption in this plant	do	(S)	(S)	(S)
	Carbon dioxide:				
28133 01	Gas[2]	S. tons	a231,793	a273,307	225,400
28133 02	Liquid[2]	do	356,790	376,337	340,347
28133 31	Solid (dry ice)	do	23,614	22,087	23,958
28137 15	Argon, high purity:				
	Produced for cylinder and bulk delivery and pipeline shipments, and for consumption	Mil. cu. ft.	892	901	831
28137 20	Hydrogen[3]	do	10,494	9,934	7,967
	Liquid and gas:				
	Produced for cylinder and bulk delivery shipment	do	788	775	760
	Produced for pipeline shipment and government use	do	3,783	3,662	2,645
	Produced for consumption in this plant	do	5,923	5,497	4,562
28135 00	Nitrogen[4 5]	do	54,651	56,902	55,453
	Gas:				
	Produced for pipeline shipment	do	38,089	39,495	38,950
	Produced for consumption in this plant	do	1,623	1,590	1,863
	Liquid:				
	Produced for bulk delivery shipment to pipeline or to air separation plants	do	1,083	1,197	994
	Produced for consumption in this plant	do	678	707	599
	Liquid and gas:				
	Produced for cylinder and bulk delivery shipment	do	13,178	13,912	13,047
28136 00	Oxygen	do	33,030	32,943	32,281
	Gas:				
	Produced for pipeline shipment	do	24,192	24,011	22,414
	Liquid:				
	Produced for bulk shipment to pipelines or to other air separation plants	do			
	Liquid and gas:		6,467	6,546	7,442
	Produced for cylinder and bulk delivery shipment	do			
	Produced for consumption in this plant	do	a2,371	2,386	2,425

Note: The percent of estimation of each item is indicated as follows (see "Description of Survey" in the text of the January 1986 report, M28C(86)-1, issued March 1986, for a discussion of estimation of missing reports): [a]Over 25 percent of this item is estimated.

[r]Revised by 5 percent or more from previously published figures. (S) Suppressed. Data did not meet publication standards of the Bureau of the Census.

[1]Excludes quantities of acetylene produced and consumed by railroad shops, shipyards, and small establishments using portable generators.

[2]Excludes quantities produced and consumed in plants manufacturing soda ash or urea. Includes gas produced and shipped by ammonia plants using the by-product method, petroleum refineries using the hydrotreating method, and synthetic natural gas plants.

[3]Excludes quantities produced and consumed in the manufacture of methanol and ammonia, but includes an unspecified amount of hydrogen produced for sale or interplant transfer to plants consuming this gas in the production of ammonia. Also excludes amounts of hydrogen produced in petroleum refineries for captive use.

[4]Excludes amount produced and used in the manufacture of ammonia and ammonia derivatives.

[5]Exports of nitrogen amounted to 4,305 m.c.f. in September and 3,097 m.c.f. in August. Percent of exports to production was 7.9 in September and 5.4 in August. Source: Bureau of the Census report, EX 546, U.S. Exports (Schedule B code 415.2600).

M28C(86)-10

CURRENT INDUSTRIAL REPORTS

Industrial Gases

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U.S. Department of Commerce
BUREAU OF THE CENSUS

OCTOBER 1986

M28C(86)-10
Issued January 1987

The statistics in this publication are based on a survey of manufacturers and represent total U.S. shipments of industrial gases (excluded are industrial gases vented or used for fuel for the producer). Estimates are included for companies whose reports were not received in time for tabulation. A description of the survey methodology and related information may be found in January 1986 report for this series M28C(86)-1, issued March 1986.

Table 1. SUMMARY OF PRODUCTION OF PRINCIPAL GASES: 1984 TO 1986

(Million cubic feet, except as noted)

Month and year	Acetylene (28132 00)	Argon, high purity (28137 15)	Carbon dioxide (short tons) Gas (28133 01)	Carbon dioxide (short tons) Liquid (28133 02)	Carbon dioxide (short tons) Solid (28133 31)	Hydrogen, high and low purity (100%) (28137 20)	Nitrogen, high and low purity (100%) (28135 00)	Oxygen, high and low purity (100%) (28136 00)
1986								
October	462	925	[a]260,044	338,423	[r]21,057	10,028	57,305	32,627
September	427	891	235,992	364,735	[r]21,022	10,541	55,408	33,078
August	433	901	273,307	376,337	22,087	9,934	56,902	32,943
July	344	881	234,796	307,376	23,958	10,602	55,111	33,267
June	359	868	201,321	344,804	23,880	10,181	54,899	32,419
May	403	938	243,771	354,079	22,512	9,783	57,009	34,050
April	339	918	246,621	326,516	20,601	10,048	55,731	33,456
March	354	924	247,667	332,779	19,013	9,818	57,226	34,725
February	324	891	200,044	308,960	17,211	9,488	53,285	32,563
January	342	913	207,701	332,985	18,583	10,304	56,720	33,852
1985								
Total	5,051	10,935	3,835,361	4,243,459	379,592	121,345	655,190	392,354
December	437	905	316,569	337,779	29,959	11,143	47,321	34,168
November	327	906	306,189	356,271	33,192	10,848	57,275	33,223
October	381	930	318,681	373,850	34,366	11,192	60,565	33,191
September	433	889	317,534	356,925	34,909	9,032	57,921	33,481
August	484	956	343,165	414,609	38,924	9,295	56,818	33,542
July	411	895	357,235	374,507	39,090	9,504	55,354	32,081
June	430	921	332,619	381,160	32,235	10,278	55,405	30,994
May	444	946	283,445	385,936	32,207	10,688	55,112	33,161
April	423	985	332,278	363,983	29,691	10,141	54,491	33,931
March	446	991	356,814	327,695	27,297	10,497	57,041	34,982
February	424	806	276,505	278,605	22,565	9,749	53,073	28,840
January	411	805	294,327	292,139	25,157	8,978	54,814	30,960
1984								
Total	4,974	10,257	3,676,587	3,915,356	352,583	112,790	651,654	386,615
December	343	901	247,307	309,655	20,432	9,379	55,287	29,170
November	451	981	279,809	315,625	24,714	8,133	56,225	29,711
October	488	793	293,230	330,982	26,587	8,587	55,919	30,846

Note: The percent of estimation of each item is indicated as follows (see "Description of Survey" in the text of the January 1986 report, M28C(86)-1, issued March 1986, for a discussion of estimation of missing reports): [a]Over 25 percent of this item is estimated.

[r]Revised by 5 percent or more from previously published figures.

Address inquiries concerning these figures to U.S. Department of Commerce, Bureau of the Census, Industry Division, Washington, D.C. 20233, or call Yvonne Baskerville (301) 763-7837.
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Table 2. PRIMARY PRODUCTION (QUANTITY) OF SPECIFIED INDUSTRIAL GASES

Product code	Product description	Unit of measure	October 1986	September 1986	October 1985
28132 00	Acetylene[1]	Mil. cu. ft.	462	427	347
	Produced for compression, including cylinder and pipeline	do.	78	75	88
	Produced for pipeline shipment (excluding that shipped to be compressed) and for consumption in this plant	do.	(S)	(S)	(S)
	Carbon dioxide:				
28133 01	Gas[2]	S. tons	260,044	235,992	225,044
28133 02	Liquid[2]	do.	338,423	364,735	360,168
28133 31	Solid (dry ice)	do.	21,057	r21,022	23,579
28137 15	Argon, high purity:				
	Produced for cylinder and bulk delivery and pipeline shipments, and for consumption	Mil. cu. ft.	925	891	869
28137 20	Hydrogen[3]	do.	10,028	10,541	8,714
	Liquid and gas:				
	Produced for cylinder and bulk delivery shipment	do.	947	788	745
	Produced for pipeline shipment and government use	do.	3,750	3,806	2,915
	Produced for consumption in this plant	do.	5,431	5,947	5,054
28135 00	Nitrogen[4 5]	do.	57,305	55,408	57,357
	Gas:				
	Produced for pipeline shipment	do.	39,937	38,857	39,439
	Produced for consumption in this plant	do.	1,483	1,423	1,777
	Liquid:				
	Produced for bulk delivery shipment to pipeline or to air separation plants	do.	1,234	1,086	961
	Produced for consumption in this plant	do.	673	678	556
	Liquid and gas:				
	Produced for cylinder and bulk delivery shipment	do.	13,978	13,164	14,624
28136 00	Oxygen	do.	32,627	33,078	31,981
	Gas:				
	Produced for pipeline shipment	do.	23,283	24,240	22,214
	Liquid:				
	Produced for bulk shipment to pipelines or to other air separation plants	do.	7,256	6,467	7,061
	Liquid and gas:				
	Produced for cylinder and bulk delivery shipment	do.	[6]2,088	2,371	2,704
	Produced for consumption in this plant	do.			

Note: The percent of estimation of each item is indicated as follows (see "Description of Survey" in the text of the January 1986 report, M28C(86)-1, issued March 1986, for a discussion of estimation of missing reports): [6]Over 25 percent of this item is estimated.

[r]Revised by 5 percent or more from previously published figures. (S) Suppressed. Data did not meet publication standards of the Bureau of the Census.

[1]Excludes quantities of acetylene produced and consumed by railroad shops, shipyards, and small establishments using portable generators.

[2]Excludes quantities produced and consumed in plants manufacturing soda ash or urea. Includes gas produced and shipped by ammonia plants using the by-product method, petroleum refineries using the hydrotreating method, and synthetic natural gas plants.

[3]Excludes quantities produced and consumed in the manufacture of methanol and ammonia, but includes an unspecified amount of hydrogen produced for sale or interplant transfer to plants consuming this gas in the production of ammonia. Also excludes amounts of hydrogen produced in petroleum refineries for captive use.

[4]Excludes amount produced and used in the manufacture of ammonia and ammonia derivatives.

[5]Exports of nitrogen amounted to 7,942 m.c.f. in October and 4,305 m.c.f. in September. Percent of exports to production was 13.8 in October and 7.8 in September. Source: Bureau of the Census report, EX 546, U.S. Exports (Schedule B code 415.2600).

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CURRENT INDUSTRIAL REPORTS

Industrial Gases

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NOVEMBER-DECEMBER 1986

U.S. Department of Commerce
BUREAU OF THE CENSUS

M28C(86)-11/12
Issued March 1987

The statistics in this publication are based on a survey of manufacturers and represent total U.S. shipments of industrial gases (excluded are industrial gases vented or used for fuel for the producer). Estimates are included for companies whose reports were not received in time for tabulation. A description of the survey methodology and related information may be found in January 1986 report for this series M28C(86)-1, issued March 1986.

This report is available electronically in CENDATA, the Bureau's online information service, through a commercial vendor. The electronic version of this report will be available approximately one week earlier than the printed report. The CENDATA report for January 1987 will be released on or about March 11, 1987. For further information, contact Customer Service, DUSD, Bureau of the Census, Washington, D.C. 20233, or call (301) 763-4100.

Table 1. SUMMARY OF PRODUCTION OF PRINCIPAL GASES: 1984 TO 1986

(Million cubic feet, except as noted)

Month and year	Acetylene (28132 00)	Argon, high purity (28137 15)	Carbon dioxide (short tons) Gas (28133 01)	Carbon dioxide (short tons) Liquid (28133 02)	Carbon dioxide (short tons) Solid (28133 31)	Hydrogen, high and low purity (100%) (28137 20)	Nitrogen, high and low purity (100%) (28135 00)	Oxygen, high and low purity (100%) (28136 00)
1986								
Total	4,725	10,843	2,832,561	4,006,403	245,486	122,681	671,337	399,417
December	473	895	[a]249,444	[a]307,127	16,682	11,869	56,115	33,847
November	465	898	[a]234,874	312,282	18,880	10,085	55,626	32,590
October	462	925	257,023	338,423	21,057	10,028	57,305	32,627
September	427	891	235,992	364,735	21,022	10,541	55,408	33,078
August	433	901	273,307	376,337	22,087	9,934	56,902	32,943
July	344	881	234,796	307,376	23,958	10,602	55,111	33,267
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1985								
Total	5,051	10,935	3,835,361	4,243,459	379,592	121,345	655,190	392,554
December	437	905	316,569	337,779	29,959	11,143	47,321	36,168
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October	381	930	318,681	373,850	34,366	11,192	60,565	33,191
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Note: The percent of estimation of each item is indicated as follows (see "Description of Survey" in the text of the January 1986 report, M28C(86)-1, issued March 1986, for a discussion of estimation of missing reports): [a]Over 25 percent of this item is estimated.

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Table 2. PRIMARY PRODUCTION (QUANTITY) OF SPECIFIED INDUSTRIAL GASES

Product code	Product description	Unit of measure	December 1986	November 1986	December 1985
28132 00	Acetylene[1]	Mil. cu. ft.	473	465	437
	Produced for compression, including cylinder and pipeline	do	79	68	90
	Produced for pipeline shipment (excluding that shipped to be compressed) and for consumption in this plant	do	(S)	(S)	(S)
	Carbon dioxide:				
28133 01	Gas[2]	S. tons	[a]249,444	[a]234,874	316,569
28133 02	Liquid[2]	do	[a]307,127	[a]312,282	337,779
28133 31	Solid (dry ice)	do	16,682	18,880	29,959
28137 15	Argon, high purity:				
	Produced for cylinder and bulk delivery and pipeline shipments, and for consumption	Mil. cu. ft.	895	898	905
28137 20	Hydrogen[3]	do	11,869	10,085	11,143
	Liquid and gas:				
	Produced for cylinder and bulk delivery shipment	do	795	801	886
	Produced for pipeline shipment and government use	do	4,570	3,745	4,365
	Produced for consumption in this plant	do	6,504	5,539	5,892
28135 00	Nitrogen[4 5]	do	56,115	55,626	47,321
	Gas:				
	Produced for pipeline shipment	do	39,489	38,998	31,185
	Produced for consumption in this plant	do	1,781	1,653	1,694
	Liquid:				
	Produced for bulk delivery shipment to pipeline or to air separation plants	do	1,153	1,341	875
	Produced for consumption in this plant	do	659	660	507
	Liquid and gas:				
	Produced for cylinder and bulk delivery shipment	do	13,033	12,974	13,060
28136 00	Oxygen	do	33,847	32,590	34,168
	Gas:				
	Produced for pipeline shipment	do	24,435	23,384	25,043
	Liquid:				
	Produced for bulk shipment to pipelines or to other air separation plants	do	6,937	7,016	6,542
	Liquid and gas:				
	Produced for cylinder and bulk delivery shipment	do			
	Produced for consumption in this plant	do	[a]2,475	[a]2,190	2,583

Note: The percent of estimation of each item is indicated as follows (see "Description of Survey" in the text of the January 1986 report, M28C(86)-1, issued March 1986, for a discussion of estimation of missing reports): [a]Over 25 percent of this item is estimated.

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[3]Excludes quantities produced and consumed in the manufacture of methanol and ammonia, but includes an unspecified amount of hydrogen produced for sale or interplant transfer to plants consuming this gas in the production of ammonia. Also excludes amounts of hydrogen produced in petroleum refineries for captive use.
[4]Excludes amount produced and used in the manufacture of ammonia and ammonia derivatives.
[5]Exports of nitrogen amounted to 2,960 m.c.f. in December, 6,016 m.c.f. in November, and 7,942 m.c.f. in October. Percent of exports to production was 5.3 in December, 10.8 in November, and 13.8 in October. Source: Bureau of the Census report, EX 546, U.S. Exports (Schedule B code 415.2600).